DECnet–RSX System Manager's Minireference Guide

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CONVENTIONS USED IN THIS GUIDE

[ ] enclose optional parameters.

| | indicate that you must choose one of the enclosed options.

UPPERCASE LETTERS indicate text that must be entered as shown. (Note: Uppercase words can be abbreviated to the first 3 or more unique characters.)

italicized lowercase words indicate generic terms that must be replaced with specific data.

NCP/VNP commands and parameters that are RSX system specific are printed in red. All CFE commands are RSX system specific.

Commands and parameters that are valid for PSI only are not included in this guide. For full command descriptions, including PSI, see the *DECnet-RSX System Manager's Guide*.

CFE COMMAND SUMMARY

All CFE commands are privileged.

```
DEFINE { CIRCUIT circuit-id }   [COST cost]
       { KNOWN CIRCUITS     }   [HELLO TIMER seconds]
                                [MAXIMUM BROADCAST ROUTERS number]
                                [MULTIPOINT ACTIVE active-ratio]
                                [ROUTER PRIORITY priority]
                                [SERVICE { DISABLE }]
                                [        { ENABLE  }]
                                [STATE { OFF }]
                                [      { ON  }]
                                [TRIBUTARY trib-address]
```

```
DEFINE EXECUTOR   [ADDRESS node-address]
                  [BROADCAST ROUTING TIMER seconds]
                  [HOST node-address]
                  [IDENTIFICATION id-string]
                  [MAXIMUM ADDRESS node-address]
                  [MAXIMUM BROADCAST NONROUTERS number]
                  [MAXIMUM COST number]
                  [MAXIMUM HOPS number]
                  [MAXIMUM LINKS number]
                  [MAXIMUM NODE COUNTERS number]
                  [NAME node-name]
                  [ROUTING TIMER seconds]
                  [SEGMENT BUFFER SIZE number]
                  [VERIFICATION [STATE] { OFF }]
                                        { ON  }
```

```
DEFINE { LINE line-id       }  [[CONTROLLER] CSR csr-address]
       { KNOWN LINES        }  [CONTROLLER { LOOPBACK }]
                               [           { NORMAL   }]
                               [DUPLEX { FULL }]
                               [       { HALF }]
                               [MULTIPOINT DEAD dead-ratio]
                               [PRIORITY hardware-priority]
                               [SPEED baud-rate]
                               [STATE { CLEARED }]
                               [      { OFF     }]
                               [      { ON      }]
                               [UNIT CSR csr-address]
                               [VECTOR vector-address]

DEFINE { KNOWN LOGGING      }  [{ EVENTS list    }]
       { LOGGING CONSOLE    }  [{ KNOWN EVENTS   }]
       { LOGGING FILE       }   [STATE { OFF }]
       { LOGGING MONITOR    }          { ON  }
```

DEFINE NODE *node-id*

[DIAGNOSTIC FILE *file*]
[DUMP ADDRESS *address*]
[DUMP COUNT *number*]
[DUMP FILE *file*]
[HARDWARE ADDRESS *E-address*]
[HOST *node-id*]
[LOAD FILE *file*]
[NAME *node-name*]
[SECONDARY [LOADER] *file*]
[SERVICE CIRCUIT *circuit-id*]
[SERVICE DEVICE *device-type*]
[SERVICE NODE VERSION {PHASEIII / PHASEIV}]
[[SERVICE] PASSWORD *password*]
[TERTIARY [LOADER] *file*]

DEFINE OBJECT *type-code*

[COPIES {*number* / SINGLE}]
[NAME *object-name*]
[USER {DEFAULT / LOGIN}]
[VERIFICATION {INSPECT / OFF / ON}]

```
DEFINE { PROCESS process-name }  [MAXIMUM CONTROLLERS count]
       { KNOWN PROCESSES      }  [MAXIMUM LINES number]
                                 [STATE { CLEARED }]
                                        { ON      }

DEFINE SYSTEM  [LARGE BUFFER SIZE number]
               [[LOCATION] { FIRSTFIT }]
                           { TOPDOWN  }
               [MAXIMUM CONTROL BUFFERS number]
               [MAXIMUM LARGE BUFFERS number]
               [MAXIMUM SMALL BUFFERS number]
               [MINIMUM RECEIVE BUFFERS number]
               [POOL BYTE-AREA byte-count]
               [POOL NAME pool-name]
               [POOL PARTITION partition-name]

EXIT [PURGE]

HELP [command][component-type]

KILL
```

```
LIST { CIRCUIT circuit-id   }
     { KNOWN CIRCUITS       }

LIST   EXECUTOR

LIST { LINE line-id         }
     { KNOWN LINES          }

LIST { KNOWN LOGGING        }
     { LOGGING CONSOLE      }
     { LOGGING FILE         }
     { LOGGING MONITOR      }

LIST { NODE node-id         }
     { KNOWN NODES          }

LIST { OBJECT type-code     }
     { KNOWN OBJECTS        }

LIST { PROCESS process-name }
     { KNOWN PROCESSES      }

LIST   SYSTEM
```

```
PURGE { KNOWN LOGGING    }   { ALL EVENTS    }
      { LOGGING CONSOLE  }   { EVENTS list   }
      { LOGGING FILE     }   { KNOWN EVENTS  }
      { LOGGING MONITOR  }

PURGE { NODE node-id   }  [ALL]
      { KNOWN NODES    }  [DIAGNOSTIC FILE]
                          [DUMP ADDRESS]
                          [DUMP COUNT]
                          [DUMP FILE]
                          [HARDWARE ADDRESS]
                          [HOST]
                          [LOAD FILE]
                          [SECONDARY [LOADER]]
                          [SERVICE CIRCUIT]
                          [SERVICE DEVICE]
                          [[SERVICE] PASSWORD]
                          [TERTIARY [LOADER]]

PURGE { OBJECT object-type }
      { KNOWN OBJECTS      }
```

NCP/VNP COMMAND SUMMARY

NCP commands and descriptors that are supported by RSX-11S are summarized following the full set.

A bar in the margin denotes a command that is applicable to both NCP and VNP; commands without a bar are valid for NCP only.

(NCP) = Parameter is valid for NCP only.
(VNP) = Parameter is valid for VNP only.

If you specify ALL, you cannot include any other parameters.

* = Command cannot be executed with the TELL prefix.

P = Privileged NP = Nonprivileged

All VNP commands and SCOPE parameters are privileged.

```
P       CLEAR  { ALL ALIASES          }  [ [SCOPE] { GLOBAL              } ]
NP             { ALIAS alias-name     }           { TERMINAL term-id     }
NP             { KNOWN ALIASES        }
```

```
P    CLEAR EXECUTOR [HOST]
                    [RECEIVE PASSWORD]
                    [TRANSMIT PASSWORD]

NP * CLEAR EXECUTOR NODE

P    CLEAR { LINE line-id       } ALL
           { KNOWN LINES      }

P    CLEAR { KNOWN LOGGING      }      [NAME]
           { LOGGING CONSOLE  }
           { LOGGING FILE     }
           { LOGGING MONITOR  }

                [ { ALL EVENTS                [ { CIRCUIT circuit-id (NCP) }                ] } ]
                { { EVENTS list               { { LINE line-id             }                } }
                { { KNOWN EVENTS              { { NODE node-id             }                } }
                                                SINK { EXECUTOR                             }
                                                     { NODE { node-id                       }
                                                            { $HOST (VNP)                   } }
                [                             [                                             ]   ]

P    CLEAR NODE node-id { CIRCUIT }
                        { NAME    }
```

P CLEAR { OBJECT *type-code* } ALL
{ KNOWN OBJECTS }

P CLEAR PROCESS *process-name*

P * CLEAR SYSTEM

NP * EXIT

NP * HELP [*command*][*component-type*] **Note**: HELP files must be on LB:[1,2].

P LOAD NODE *node-id* [ADDRESS *node-address*]
[FROM *file*]
[HOST *node-id*]
[NAME *node-name*]
[PHYSICAL ADDRESS *E-address*]
[SECONDARY [LOADER] *file*]
[SERVICE DEVICE *device-type*]
[SERVICE NODE VERSION { PHASEIII }]
[{ PHASEIV }]
[[SERVICE] PASSWORD *password*]
[TERTIARY [LOADER] *file*]
[VIA *circuit-id*]

P LOAD VIA *circuit-id* [ADDRESS *node-address*]
[FROM *file*]
[HOST *node-id*]
[NAME *node-name*]
[PHYSICAL ADDRESS *E-address*]
[SECONDARY [LOADER] *file*]
[SERVICE DEVICE *device-type*]
[SERVICE NODE VERSION { PHASEIII / PHASEIV }]
[[SERVICE] PASSWORD *password*]
[TERTIARY [LOADER] *file*]

P LOOP CIRCUIT *circuit-id* [HELP { FULL / RECEIVE / TRANSMIT }]
[{ [PHYSICAL ADDRESS *E-address*] / [ASSISTANT PHYSICAL ADDRESS *E-address*] }]
[{ [NODE *E-node-name*] / [ASSISTANT NODE *E-node-name*] }]
[COUNT *count*]
[LENGTH *length*]
[WITH { MIXED / ONES / ZEROES }]

```
NP    LOOP { NODE node-id[acc-con-info] } [COUNT count]
           { EXECUTOR                   } [LENGTH length]
                                          [WITH { MIXED  }]
                                                { ONES   }
                                                { ZEROES }]
```

```
NP    SET ALIAS alias-name DESTINATION dest-node [ [SCOPE] { GLOBAL          } ]
                                                 { TERMINAL term-id }
```

```
P     SET { CIRCUIT circuit-id } [COST cost]
          { KNOWN CIRCUITS    } [HELLO TIMER seconds]
                                [MULTIPOINT ACTIVE active-ratio]
                                [OWNER { DLX }]
                                       { XPT }]
                                [SERVICE { DISABLE }]
                                         { ENABLE  }]
                                [STATE { OFF     }]
                                       { ON      }
                                       { SERVICE }]
                                [TRIBUTARY trib-address]
```

P SET EXECUTOR [HOST *node-id*]
[RECEIVE PASSWORD *password*]
[ROUTING TIMER *seconds*]
[SEGMENT BUFFER SIZE *number*]
• [STATE { OFF / ON / SHUT(NCP) }] (VNP has FIXED/UNFIXED options for ON)
[TRANSMIT PASSWORD *password*]
[VERIFICATION [STATE] { OFF / ON }]

NP • SET EXECUTOR NODE *node-id*[*acc-con-info*]

P SET KNOWN LINES

Loading options: [ALL]
[DEAD TIMER *milliseconds*]
[DELAY TIMER *milliseconds*]
[DUPLEX { FULL / HALF }]
[[LOCATION] { FIRSTFIT (NCP) / TOPDOWN }]

P SET LINE *line-id*

Loading options:

[ALL]
[[CONTROLLER] CSR *csr-address*]
[DEAD TIMER *milliseconds*]
[DELAY TIMER *milliseconds*]
[DUPLEX {FULL / HALF}]
[[LOCATION] {FIRSTFIT (NCP) / TOPDOWN}]
[MULTIPOINT DEAD *dead-ratio*]
[PRIORITY *hardware-priority*]
[UNIT CSR *csr-address*]
[VECTOR *vector-address*]

Loaded options:

[CONTROLLER {LOOPBACK / NORMAL}] (NCP)

P SET { KNOWN LOGGING | LOGGING CONSOLE | LOGGING FILE | LOGGING MONITOR } [NAME *name* | STATE { OFF | ON } | { EVENTS *list* | KNOWN EVENTS [{ CIRCUIT *circuit-id* (NCP) | LINE *line-id* | NODE *node-id* } | SINK { EXECUTOR | NODE { *node-id* | $HOST (VNP) } }] }]

P SET NODE *node-name* CIRCUIT *circuit-id*

P SET NODE *node-id* NAME *node-name*

P SET OBJECT *type-code* [COPIES { *number* | SINGLE }] [NAME *object-name*] [USER { DEFAULT | LOGIN }] [VERIFICATION { INSPECT | OFF | ON }]

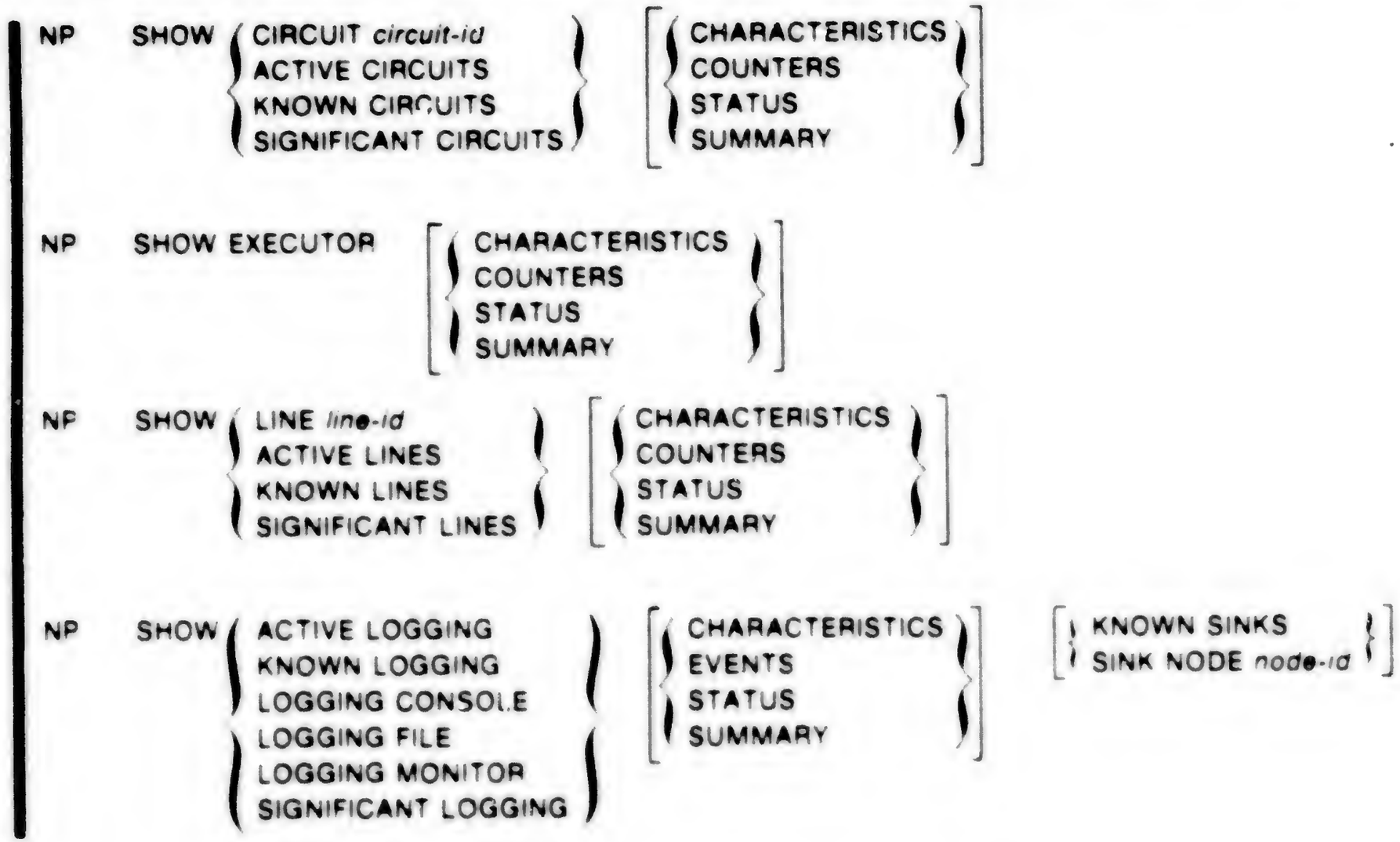
P SET PROCESS *process-name* [ALL]
[[LOCATION] { FIRSTFIT / TOPDOWN }]
[MAXIMUM CONTROLLERS *count*]
[MAXIMUM LINES *count*]
[PARTITION *partition-name*]

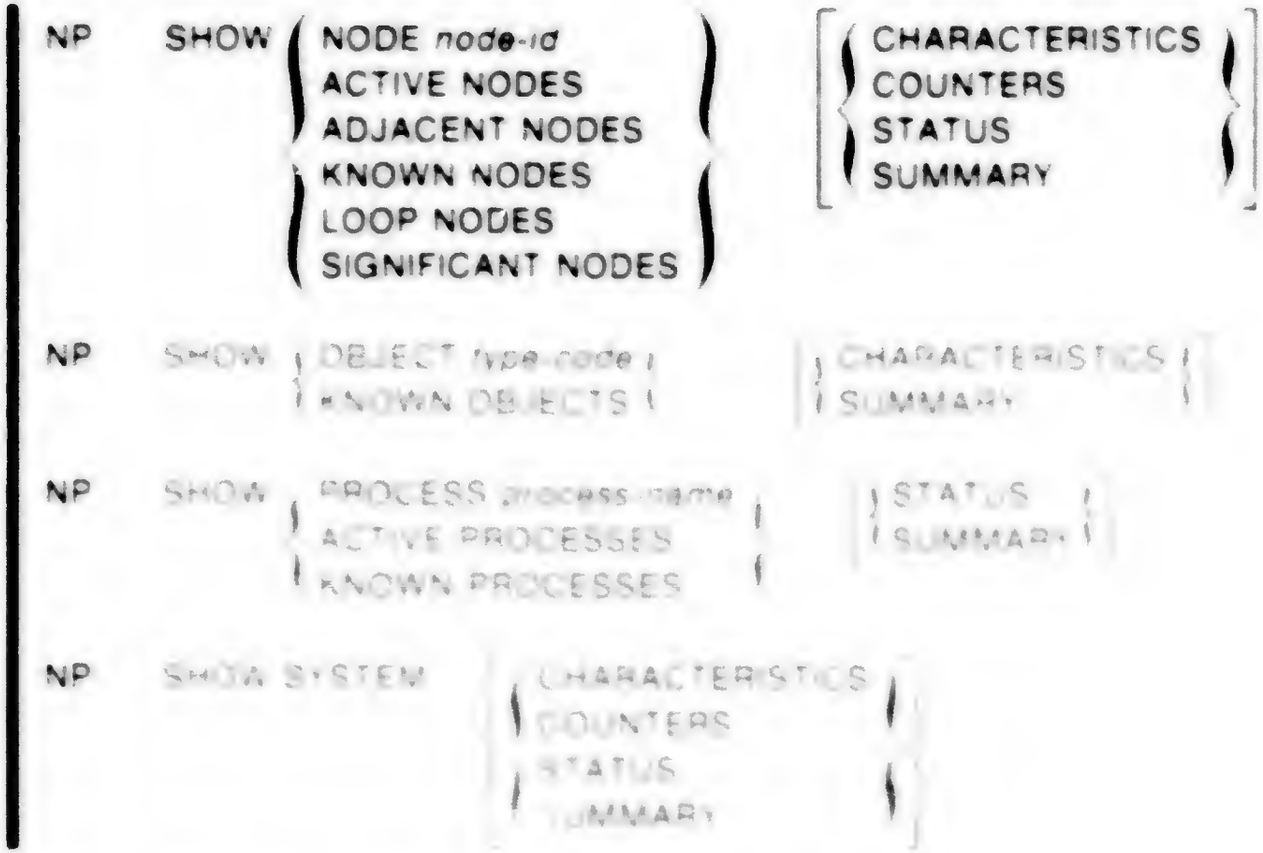
P SET SYSTEM (VNP can specify TOP)

SHOW command usage:

- All NCP SHOW commands can be directed to an output file by adding TO *file* at the end of the command
- ACTIVE, SIGNIFICANT, COUNTERS, and STATUS specifiers apply to NCP only
- SUMMARY is always the default display type

NP SHOW { ALL ALIASES / ALIAS *alias-name* / KNOWN ALIASES } [{ CHARACTERISTICS / SUMMARY }] [[SCOPE] { GLOBAL / TERMINAL *term-id* }]


NP SHOW CIRCUIT circuit-id
ACTIVE CIRCUITS
KNOWN CIRCUITS
SIGNIFICANT CIRCUITS
CHARACTERISTICS
COUNTERS
STATUS
SUMMARY
NP SHOW EXECUTOR
CHARACTERISTICS
COUNTERS
STATUS
SUMMARY
NP SHOW LINE line-id
ACTIVE LINES
KNOWN LINES
SIGNIFICANT LINES
CHARACTERISTICS
COUNTERS
STATUS
SUMMARY
NP SHOW ACTIVE LOGGING
KNOWN LOGGING
LOGGING CONSOLE
LOGGING FILE
LOGGING MONITOR
SIGNIFICANT LOGGING
CHARACTERISTICS
EVENTS
STATUS
SUMMARY
KNOWN SINKS
SINK NODE node-id


NP SHOW NODE node-id
ACTIVE NODES
ADJACENT NODES
KNOWN NODES
LOOP NODES
SIGNIFICANT NODES
CHARACTERISTICS
COUNTERS
STATUS
SUMMARY
NP SHOW OBJECT type-code
KNOWN OBJECTS
CHARACTERISTICS
SUMMARY
NP SHOW PROCESS process-name
ACTIVE PROCESSES
KNOWN PROCESSES
STATUS
SUMMARY
NP SHOW SYSTEM
CHARACTERISTICS
COUNTERS
STATUS
SUMMARY
NP TELL node-id[acc-con-info] ncp-command

P TRIGGER NODE *node-id* [VIA *circuit-id*]
[PHYSICAL ADDRESS *E-address*]
[[SERVICE] PASSWORD *password*]

P TRIGGER VIA *circuit-id* [PHYSICAL ADDRESS *E-address*]
[[SERVICE] PASSWORD *password*]

P ZERO { CIRCUIT *circuit-id* / KNOWN CIRCUITS } [COUNTERS]

P ZERO EXECUTOR [COUNTERS]

P ZERO { LINE *line-id* / KNOWN LINES } [COUNTERS]

P ZERO { NODE *node-id* / KNOWN NODES } [COUNTERS]

P ZERO SYSTEM [COUNTERS]

RSX-11S NCP COMMAND SUMMARY

The following commands are supported by the RSX-11S NCP and the RSX-11S NICE. The privileged (P) and nonprivileged (NP) classifications apply only to commands sent from a remote system to an RSX-11S NICE that has been built with a privileged password. All commands can be initiated both locally and remotely unless one of the following restrictions is indicated:

† - Command cannot be executed by RSX-11S NCP.

‡ - Command cannot be initiated from a remote node.

NP LOOP { NODE *node-id*[*acc-con-info*] / EXECUTOR } [COUNT *count*] [LENGTH *length*] [WITH { MIXED / ONES / ZEROES }]

P SET CIRCUIT *circuit-id* STATE { OFF / ON }

P SET EXECUTOR HOST *node-id*

P ‡ SET LINE CONTROLLER { LOOPBACK | NORMAL }

P SET LOGGING CONSOLE STATE { OFF | ON }

NP SHOW { CIRCUIT *circuit-id* | + ACTIVE CIRCUITS | + KNOWN CIRCUITS } [{ COUNTERS | STATUS | SUMMARY }]

NP SHOW EXECUTOR [{ CHARACTERISTICS | COUNTERS | STATUS | SUMMARY }]

NP SHOW { LINE *line-id* | + ACTIVE LINES | + KNOWN LINES } [{ COUNTERS | STATUS | SUMMARY }]

NP SHOW LOGGING CONSOLE STATUS

NP SHOW { NODE *node-id* / + ACTIVE NODES / + KNOWN NODES } [{ CHARACTERISTICS / COUNTERS / STATUS / SUMMARY }]

NP SHOW SYSTEM [{ CHARACTERISTICS / COUNTERS / STATUS / SUMMARY }]

P ZERO { CIRCUIT *circuit-id* / EXECUTOR / LINE *line-id* / + NODE *node-id* / SYSTEM } [COUNTERS]

P + ZERO KNOWN { CIRCUITS / LINES / NODES } [COUNTERS]

DECNET-RSX EVENT CODES

Network Management

0 0 Event records lost

0 2 Automatic line counters

0 3 Automatic service

0 6 Passive loopback

0 7 Aborted service request

Session Control

2.0 Local node state change

2 1 Access control failure

Transport

4 0 Aged packet loss

4 1 Node unreachable packet loss

4 2 Node out of range packet loss

4 3 Oversized packet loss

4 4 Packet format error

4 5 Partial routing update loss

4 6 Verification reject

4 7 Circuit down - circuit fault

End Communications

3.2 Node data base reused

Data Link

5.13 Initialization failure

5.14 Send failed

5.15 Receive failed

RSX Specific

64.1 Routing data base corrupt

64.2 Routing data base restored

68.14 Normal usage terminated

4.8 Circuit down

4.9 Circuit down - operator initiated

4.10 Circuit up

4.11 Initialization failure - line fault

4.12 Initialization failure - software fault

4.13 Initialization failure - operator fault

4.15 Adjacency up

4.16 Adjacency rejected

4.18 Adjacency down